



(19)

(11) Publication number: 02

Generated Document.

PATENT ABSTRACTS OF JAPAN

(21) Application number: 63166151

(51) Intl. Cl.: C23C 14/46

(22) Application date: 04.07.88

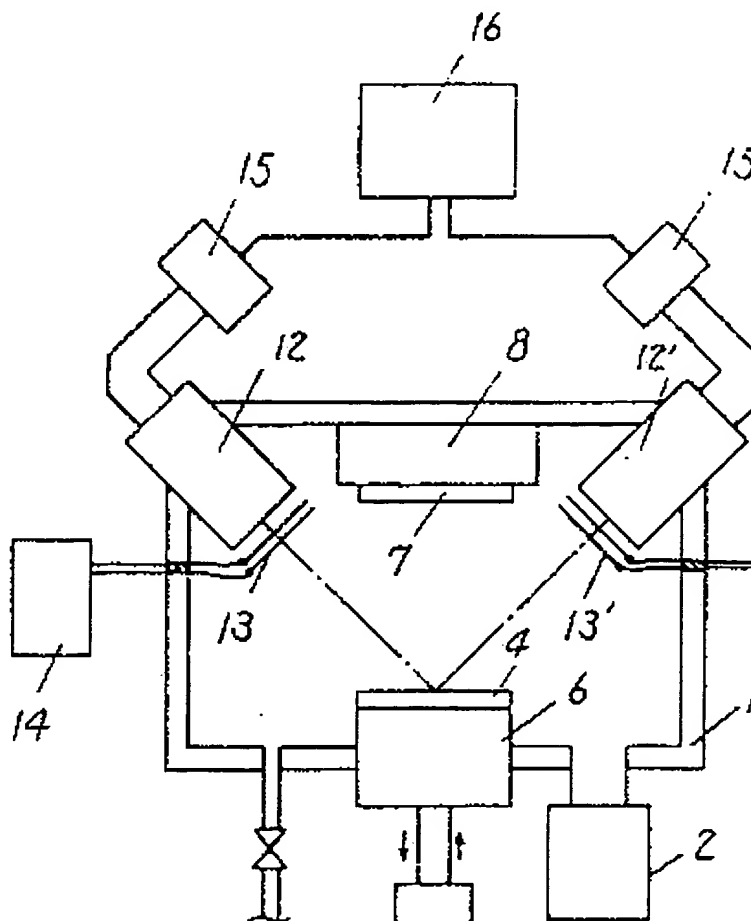
<p>(30) Priority:</p> <p>(43) Date of application publication: 18.01.90</p> <p>(84) Designated contracting states:</p>	<p>(71) Applicant: MATSUSHITA ELECTRIC</p> <p>(72) Inventor: TSUDA YOSHIYUKI YASUI HIDEAKI MUKAI YUJI TANAKA HIROYOSHI</p> <p>(74) Representative:</p>
--	--

(54) ION BEAM SPUTTERING
DEVICE AND PRODUCTION
OF THIN MULTICOMPONENT
FILM

(57) Abstract:

PURPOSE: To form a thin multicomponent film free from the partial nonuniformity of composition ratio by staggering the time for the production of each individual ion beam and also changing voltages to be impressed on respective ion beam-drawing systems by means of individual ion guns.

CONSTITUTION: Microwave ion guns 12, 12' and ion beam-drawing systems 13, 13' equal or larger in number to or than the number of the components of a material contained in a sputtering target 4 are placed so that they radiate from the sputtering target 4 and have prescribed angles with respect to the target surface. A beam control device 16 in which radiant mode is regulated so that ion beams from individual plural ion guns 12, 12'



are emitted intermittently and the time for the radiant mode in the individual ion guns 12, 12' is staggered is provided.

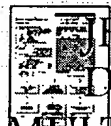
Simultaneously, drawing voltages to be impressed on the respective ion beam-drawing systems 13, 13' are changed with every ion gun.

Accordingly, the nonuniform distribution of composition ratio at the time of forming a thin multicomponent film is removed, and the thin film of stable quality can be formed.

COPYRIGHT: (C) 1990, JPO & Japio

Delphion **Intellectual Property Network**

To Search & Research

[IPN Home](#) | [Search](#) | [Order](#) | [Shopping Cart](#) | [Login](#) | [Site Map](#) | [Help](#)**Patent Plaques**Recognize
the achievement**JP2015168A2: ION BEAM SPUTTERING
DEVICE AND PRODUCTION OF THIN
MULTICOMPONENT FILM**[View Images \(1 pages\)](#) | [View INPADOC only](#)Country **JP Japan**

Kind

Inventor(s) **TSUDA YOSHIYUKI
YASUI HIDEAKI
MUKAI YUJI
TANAKA HIROYOSHI**Applicant(s) **MATSUSHITA ELECTRIC IND CO LTD**
[News, Profiles, Stocks and More about this company](#)Issued/Filed Dates **Jan. 18, 1990 / July 4, 1988**Application Number **JP1988000166151**IPO Class **C23C 14/46;**

Abstract

Purpose: To form a thin multicomponent film free from the partial nonuniformity of composition ratio by staggering the time for the production of each individual ion beam and also changing voltages to be impressed on respective ion beam-drawing systems by means of individual ion guns.

Constitution: Microwave ion guns 12, 12' and ion beam-drawing systems 13, 13' equal or larger in number to or than the number of the components of a material contained in a sputtering target 4 are placed so that they radiate from the sputtering target 4 and have prescribed angles with respect to the target surface. A beam control device 16 in which radiant mode is regulated so that ion beams from individual plural ion guns 12, 12' are emitted intermittently and the time for the radiant mode in the individual ion guns 12, 12' is staggered is provided. Simultaneously, drawing voltages to be impressed on the respective ion beam-drawing systems 13, 13' are changed with every ion gun. Accordingly, the nonuniform distribution of composition ratio at the time of forming a thin multicomponent film is removed, and the thin film of stable quality can be formed.

COPYRIGHT: (C)1990,JPO&Japio

Other Abstract Info

DERABS C90-062847 DERC90-062847

Foreign References

(No patents reference this one)

Powered by **DB2**
and **NetData**Nominate this
invention
for the Gallery...**Alternative
Searches**[Patent Number](#)[Boolean Text](#)[Advanced Text](#)**Browse**[U.S. Class](#)[U.S. Class
by number](#)**TDB**
IBM Technical